

ENGINEERING REPORT

IN SUPPORT OF AN AMENDMENT TO A  
CONSTRUCTION PERMIT APPLICATION  
FOR A NEW STATION

PAROWAN, UTAH  
CH300C2 19,300 WATTS 241 M

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## Technical Narrative

This engineering report has been prepared on behalf of Tri States Radio, LLC, Salt Lake City, UT, in support of an amendment to a construction permit application for a new station.

This proposal would not be subject to environmental processing in accordance with Section 1.1306. It is believed that this proposal conforms to all applicable rules and regulations of the FCC.

All engineering calculations, other than RFR, were calculated using RadioSoft Comstudy 2 software.

## Proposed Station Data

Frequency: 107.9 MHz.

Channel: 300

ERP: 19,300 watts

Class: C2

## Proposed Antenna Location

The geographic coordinates (NAD 27) of the proposed site are as follows:

North Latitude: 37-50-30.6

West Longitude: 112-58-26.8

### Transmitting Antenna

ANTENNA: Shively 6810, 4-bay, 1 wavelength spacing.

### Availability of Channels

This application complies with 47 CFR § 73.203 in that the proposed station is listed in the table of allocations.

### Community Coverage

This application complies with 47 CFR § 73.315 in that the 70 dBu contour of the proposed station will cover the entire city of license as shown in Figure 1.

### Main Studio Location

The main studio of the proposed station will comply with 47 CFR § 73.1125.

### Separation Requirements

This application complies with 47 CFR § 73.207 in that proposed station is properly spaced with any pertinent first, second, third adjacent and IF channels, as shown in Table 1.

## Environmental Considerations

The station will operate with an effective radiated power of 19.3 kilowatts into a Shively 6810, 4-bay antenna.

The non-ionizing RFR analysis was conducted utilizing the FCC FM Model software program. Results of this analysis are shown in Figure 2.

The worst-case, predicted power density for the proposed station at two meters above ground level is estimated to be  $41.1 \mu\text{W}/\text{cm}^2$ , which will occur at a horizontal distance of 21.6 meters from the base of the tower.

Since the permitted power density for general-population/uncontrolled exposure (GPE) in the FM band is  $200 \mu\text{W}/\text{cm}^2$ , and the predicted power density of the proposed site is 20.6 % of the GPE, the proposed site is in compliance.

Access to the transmitting site is restricted and appropriately marked with warning signs. When it becomes necessary for workers to ascend the tower, appropriate measures, such as reduction or shut down of power if necessary, shall be taken to ensure that the human exposure to radio-frequency radiation will not exceed the FCC guidelines.

| Callsign | State | City          | Freq  | Channel | ERP_w  | Class | Status | Distance_km | Sep | Clr  |
|----------|-------|---------------|-------|---------|--------|-------|--------|-------------|-----|------|
| KVGS     | NV    | LAUGHLIN      | 107.9 | 300     | 98000  | C     | LIC    | 270.78      | 249 | 21.8 |
| KXFF     | AZ    | COLORADO CITY | 107.3 | 297     | 35000  | C1    | LIC    | 84.99       | 79  | 6    |
| KVGS     | AZ    | MEADVIEW      | 107.9 | 300     | 100000 | C     | APP    | 252.82      | 249 | 3.8  |

TABLE 1: Pertinent first, second, third adjacent, and IF channel stations spaced with proposed station.

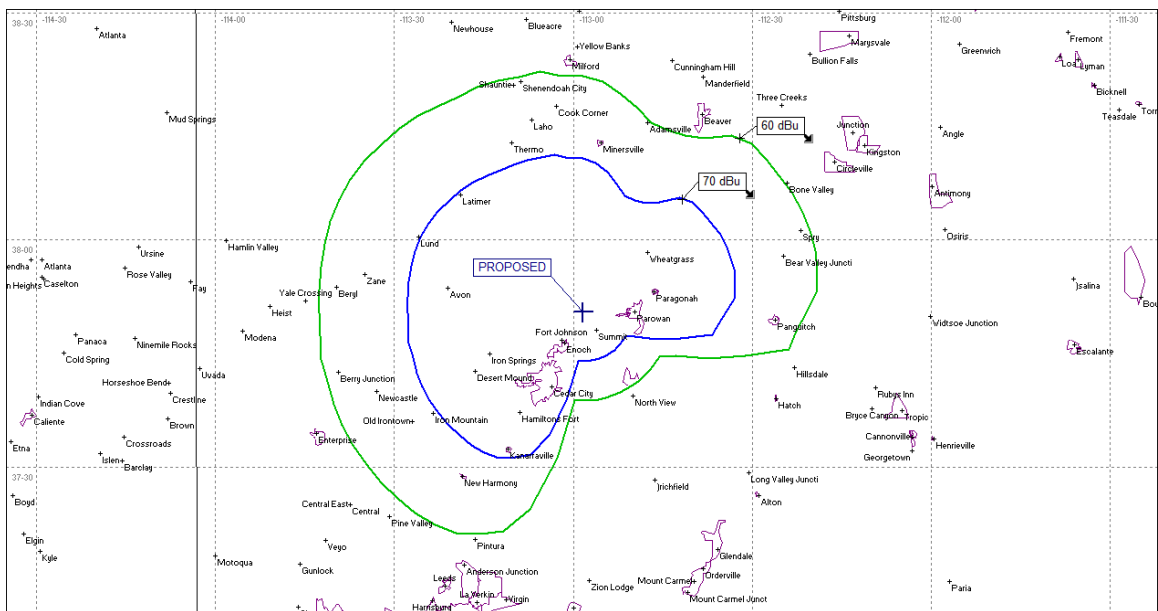


FIGURE 1: Coverage contours of the proposed station.

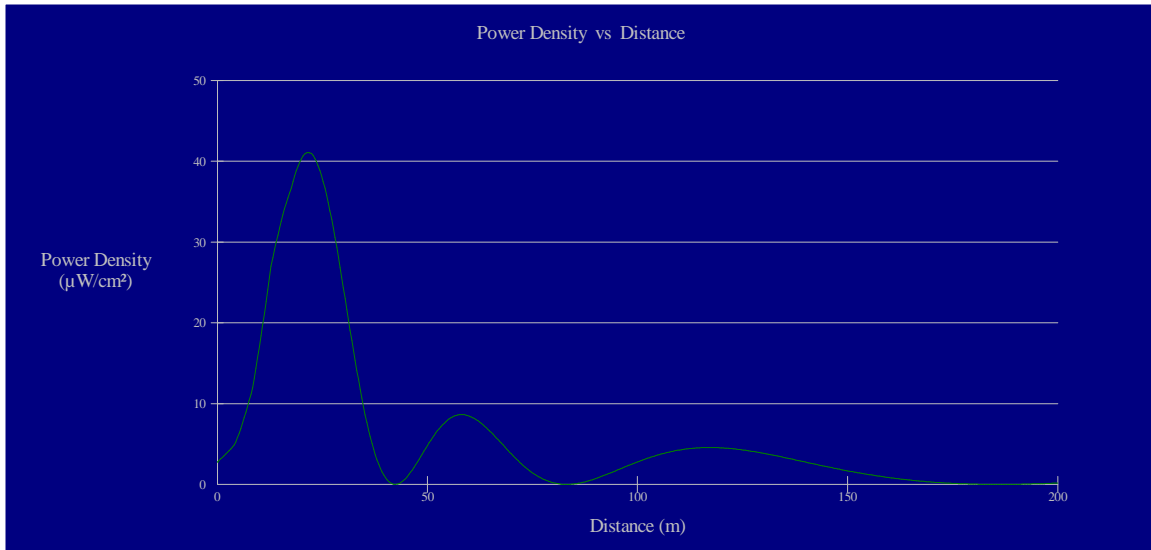


FIGURE 2: Predicted Power Density vs. distance of the proposed station.